2008

Test 1935: New Holland TV6070

Nebraska Tractor Test Laboratory

NEBRASKA OECD TRACTOR TEST 1935 - SUMMARY 609
NEW HOLLAND TV6070 DIESEL
HYDROSTATIC

POWER TAKE-OFF PERFORMANCE

Power HP *(kW)*	Crank shaft speed rpm	Gal/hr *(l/h)*	lb/hp.hr *(kg/kW.h)*	Hp.hr/gal *(kW.h/l)*	Mean Atmospheric Conditions
MAXIMUM POWER AND FUEL CONSUMPTION					
Rated Engine Speed—(PTO speed—1074 rpm)					
106.73 *(79.59)*	2200	8.59 *(32.51)*	0.564 *(0.343)*	12.43 *(2.45)*	
Standard Power Take-off Speed (1000 rpm)					
112.77 *(84.09)*	2048	8.38 *(31.70)*	0.520 *(0.317)*	13.46 *(2.65)*	
Maximum Power (1 Hour)					
115.85 *(86.39)*	1850	7.96 *(30.12)*	0.481 *(0.293)*	14.56 *(2.87)*	
VARYING POWER AND FUEL CONSUMPTION					
106.73 *(79.59)*	2200	8.59 *(32.51)*	0.564 *(0.343)*	12.43 *(2.45)*	Air temperature
95.11 *(70.92)*	2323	8.28 *(31.33)*	0.610 *(0.371)*	11.49 *(2.26)*	76°F *(24°C)*
73.67 *(54.94)*	2366	7.21 *(27.31)*	0.686 *(0.417)*	10.21 *(2.01)*	Relative humidity
49.18 *(36.67)*	2374	6.10 *(23.07)*	0.868 *(0.528)*	8.07 *(1.59)*	41%
24.94 *(18.59)*	2393	4.81 *(18.21)*	1.352 *(0.822)*	5.18 *(1.02)*	Barometer
3.53 *(2.63)*	2399	3.64 *(13.78)*	7.230 *(4.398)*	0.97 *(0.19)*	28.77" Hg *(97.43 kPa)*

Maximum torque -483 lb.-ft. *(655 Nm)* at 1100 rpm
Maximum torque rise - 90.2%
Torque rise at 1799 engine rpm - 32%
Power increase at 1850 engine rpm - 8.5%

DRAWBAR PERFORMANCE
FUEL CONSUMPTION CHARACTERISTICS

Power Hp *(kW)*	Drawbar pull lbs *(kN)*	Speed mph *(km/h)*	Crank-shaft speed rpm	Slip %	Fuel Consumption lb/hp.hr *(kg/kW.h)*	Fuel Consumption Hp.hr/gal *(kW.h/l)*	Temp.°F *(°C)* cool-ing med	Air dry bulb	Barom. inch Hg *(kPa)*
Maximum Power—2nd Range									
80.25 *(59.84)*	6072 *(27.01)*	4.96 *(7.98)*	2200	1.7	0.750 *(0.456)*	9.34 *(1.84)*	192 *(89)*	66 *(19)*	29.01 *(98.24)*
75% of Pull at Maximum Power—2nd Range									
66.21 *(49.37)*	4559 *(20.28)*	5.45 *(8.76)*	2324	1.0	0.847 *(0.515)*	8.27 *(1.63)*	193 *(89)*	66 *(19)*	29.01 *(98.24)*
50% of Pull at Maximum Power—2nd Range									
46.87 *(34.95)*	3080 *(13.70)*	5.71 *(9.19)*	2374	0.7	1.048 *(0.638)*	6.69 *(1.32)*	193 *(89)*	67 *(19)*	29.01 *(98.24)*
75% of Pull at Reduced Engine Speed—3rd Range									
65.58 *(48.90)*	4550 *(20.24)*	5.41 *(8.70)*	1736	0.9	0.653 *(0.397)*	10.73 *(2.11)*	187 *(86)*	66 *(19)*	29.01 *(98.24)*
50% of Pull at Reduced Engine Speed—6th Range									
47.02 *(35.07)*	3045 *(13.54)*	5.79 *(9.32)*	1389	0.5	0.637 *(0.388)*	11.00 *(2.17)*	184 *(84)*	68 *(20)*	29.01 *(98.24)*

Location of tests: Nebraska Tractor Test Laboratory, University of Nebraska, Lincoln Nebraska 68583-0832
Dates of tests: September 4 - 10, 2008

Manufacturer: Case Corporation, 700 State Street Racine, Wi. 53404 USA.

FUEL, OIL and TIME: Fuel No. 2 Diesel **Specific gravity converted to 60°/60° F *(15°/15°C)*** 0.8416 **Fuel weight** 7.007 lbs/gal *(0.840 kg/l)* **Oil SAE** 15W40 **API service classification** CI-4 **Transmission and hydraulic lubricant** NH Ambra Multi G134 fluid **Front and rear axle lubricant** NH Ambra Multi G 134 fluid **Total time engine was operated** 25.0 hours

ENGINE: Make CNH/NEF Diesel **Type** six cylinder vertical with turbocharger and air to air aftercooler **Serial No.** 51552 **Crankshaft** lengthwise **Rated engine speed** 2200 **Bore and stroke** 4.094" x 5.197" *(104.0 mm x 132.0 mm)* **Compression ratio** 17.5 to 1 **Displacement** 410 cu in *(6728 ml)* **Starting system** 12 volt **Lubrication** pressure **Air cleaner** two paper elements and aspirator **Oil filter** one full flow cartridge **Oil cooler** engine coolant heat exchanger for crankcase oil, radiator for transmission and hydraulic oil **Fuel filter** one paper element **Muffler** underhood **Exhaust** vertical **Cooling medium temperature control** thermostat

ENGINE OPERATING PARAMETERS: Fuel rate: 56.2 - 62.0 lb/h *(25.5 - 28.1 kg/h)* **High idle:** 2380 - 2420 rpm **Turbo boost:** nominal 18.9 - 21.8 psi *(130 - 150 kPa)* as measured 19.3 psi *(133 kPa)*

CHASSIS: Type four wheel drive **Serial No.** *RSV0057149* **Tread width** rear 60.0" *(1525 mm)* to 80.0" *(2030 mm)* front 60.0"*(1525 mm)* to 80.0" *(2030 mm)* **Wheelbase** 118.1" *(3000 mm)* **Hydraulic control system** direct engine drive **Transmission** infinitely variable hydrostatic useing a variable displacement pump and motor with 8 ranges. **Nominal travel speeds mph *(km/h)*** first 0-6.7 *(0-10.8)* second 0-7.7 *(0-12.4)* third 0-8.3*(0-13.3)* fourth 0-9.1 *(0-14.6)* fifth 0-10.3 *(0-16.6)* sixth 0-11.6 *(0-18.7)* seventh 0-17.5 *(0-28.1)* eighth 0-19.7 *(0-31.7)* reverse 0-6.7 *(0-10.8)*, 0-7.7 *(0-12.4)*, 0-8.3*(0-13.3)*, 0-9.1 *(0-14.6)*, 0-10.3 *(0-16.6)*, 0-11.6 *(0-18.7)*, 0-17.5 *(0-28.1)*, 0-19.7 *(0-31.7)* **Clutch** none **Brakes** caliper disc hydraulically actuated by foot pedal **Steering** hydrostatic and articulated **Power take-off** 540 rpm at 1890 engine rpm or1000 rpm at 2049 engine rpm **Unladen tractor mass** 15205 lb *(6897 kg)*

DRAWBAR PERFORMANCE
MAXIMUM POWER AT SELECTED SPEEDS

Power Hp *(kW)*	Drawbar pull lbs *(kN)*	Speed mph *(km/h)*	Crank-shaft speed rpm	Slip %	Fuel Consumption lb/hp.hr *(kg/kW.h)*	Hp.hr/gal *(kW.h/l)*	Temp.°F*(°C)* cool-ing med	Air dry bulb	Barom. inch Hg *(kPa)*
					1st Range				
63.32 *(47.22)*	11815 *(52.56)*	2.01 *(3.23)*	2278	6.2	0.967 *(0.588)*	7.25 *(1.43)*	192 *(89)*	49 *(9)*	29.03 *(98.31)*
					1st Range				
83.62 *(62.35)*	10452 *(46.49)*	3.00 *(4.83)*	1855	3.4	0.678 *(0.413)*	10.33 *(2.04)*	190 *(88)*	51 *(11)*	29.02 *(98.27)*
					1st Range				
85.77 *(63.96)*	9455 *(42.06)*	3.40 *(5.47)*	1856	3.0	0.658 *(0.400)*	10.66 *(2.10)*	191 *(88)*	53 *(12)*	29.02 *(98.27)*
					1st Range				
87.29 *(65.09)*	8137 *(36.19)*	4.02 *(6.47)*	1854	2.3	0.645 *(0.392)*	10.87 *(2.14)*	190 *(88)*	58 *(14)*	29.02 *(98.27)*
					1st Range				
87.39 *(65.17)*	7435 *(33.07)*	4.41 *(7.09)*	1840	2.2	0.645 *(0.392)*	10.87 *(2.14)*	190 *(88)*	56 *(13)*	28.86 *(97.73)*
					2nd Range				
86.83 *(64.75)*	6925 *(30.80)*	4.70 *(7.57)*	1945	2.0	0.669 *(0.407)*	10.47 *(2.06)*	190 *(88)*	60 *(16)*	29.02 *(98.27)*
					2nd Range				
86.14 *(64.23)*	6499 *(28.91)*	4.97 *(8.00)*	2027	1.6	0.685 *(0.417)*	10.22 *(2.01)*	191 *(88)*	59 *(15)*	29.02 *(98.27)*
					3rd Range				
84.16 *(62.76)*	6139 *(27.31)*	5.14 *(8.27)*	2069	1.5	0.700 *(0.426)*	10.01 *(1.97)*	191 *(88)*	63 *(17)*	29.02 *(98.27)*
					4th Range				
81.45 *(60.74)*	5531 *(24.60)*	5.52 *(8.89)*	2151	1.3	0.738 *(0.449)*	9.50 *(1.87)*	191 *(88)*	66 *(19)*	29.02 *(98.27)*
					5th Range				
78.88 *(58.82)*	4887 *(21.74)*	6.05 *(9.74)*	2080	1.2	0.754 *(0.458)*	9.30 *(1.83)*	191 *(88)*	63 *(17)*	28.87 *(97.76)*
					6th Range				
78.80 *(58.76)*	4221 *(18.78)*	7.00 *(11.27)*	2165	0.9	0.769 *(0.468)*	9.11 *(1.79)*	191 *(88)*	66 *(19)*	29.02 *(98.27)*
					6th Range				
77.07 *(57.47)*	3586 *(15.95)*	8.06 *(12.97)*	2166	0.6	0.784 *(0.477)*	8.94 *(1.76)*	192 *(89)*	66 *(19)*	29.02 *(98.27)*

REPAIRS AND ADJUSTMENTS: No repairs or adjustments.

REMARKS: All test results were determined from observed data obtained in accordance with official OECD, SAE and Nebraska test procedures. For the maximum power tests, the fuel temperature at the primary fuel filter was maintained at 99°F *(37°C)*. This tractor did not meet the manufacturer's claim of 30.0 GPM *(113 l/min)* hydraulic flow. The manufacturer's 3 point lift claim of 8700 lbs *(3950 kg)* was not verified. The manufacturer's claim of 35 GPM *(133 lpm)* hydraulic flow with optional pump was not verified. The performance figures on this Summary were taken from a test conducted under the OECD Code II test procedure.

We, the undersigned, certify that this is a true and correct report of official Tractor Test No. **1935**, Nebraska Summary 609,December 2,2008.

Roger M. Hoy
Director

M.F. Kocher
V.I Adamchuk
J.A. Smith
Board of Tractor Test Engineers

TRACTOR SOUND LEVEL WITH CAB	**dB(A)**
At no load in 3rd range	79.7
Bystander	- -

TIRES AND WEIGHT — **Tested without ballast**

Rear tires - No.,size, ply & psi*(kPa)*	Two 480/85R34;**;23*(160)*
Front tires - No.,size, ply & psi*(kPa)*	Two 480/85R34;**;23*(160)*
Height of Drawbar	21.0 in *(535 mm)*
Static Weight with operator- Rear	8180 lb *(3710 kg)*
-Front	7200 lb *(3266 kg)*
-Total	15380 lb *(6976 kg)*

HYDRAULIC PERFORMANCE
Three point lift data taken from tests conducted on the New Holland TV-140(Nebraska summary 323)

CATEGORY: II
Quick Attach: None
OECD Static test

Maximum force exerted through whole range:	5440 lbs *(24.2 kN)*(cab end)(one boost cylinder)
	4450 lbs *(19.8 kN)*(engine end)
i) Sustained pressure of the open relief valve:	3058 psi *(210 bar)*
ii) Pump delivery rate at minimum pressure	
at 2210 engine rpm:	29.5 GPM *(111.6 l/min)*
at 2390 engine rpm:	31.9 GPM *(120.8 l/min)*
iii) Pump delivery rate at maximum	
hydraulic power:	28.3 GPM *(107.1 l/min)*
Delivery pressure:	2851 psi *(197 bar)*
Power:	47.0 HP *(35.1 kW)*

THREE POINT HITCH PERFORMANCE(SAE Static test)

Observed maximum pressure psi. *(bar)*	3090 *(213)*
Location:	lift cylinder
Hydraulic oil temperature: °F *(°C)*	150 *(65)*
Location:	hydraulic sump
Category:	II
Quick attach:	none

Cab end
System pressure 2770 psi *(191 Bar)*

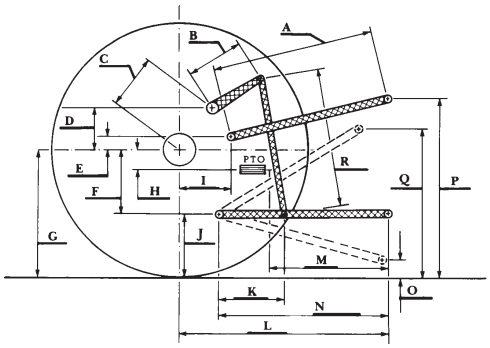
Hitch point distance to ground level in. *(mm)*	8.0 *(203)*	13.4 *(341)*	21.3 *(541)*	29.2 *(741)*	37.0 *(941)*
Lift force on frame lb	9395	9330	8275	7935	6720
" " " " " " *(kN)*	*(41.8)*	*(41.5)*	*(38.8)*	*(35.3)*	*(29.9)*

Engine end
System pressure 2770 psi *(191 Bar)*

Hitch point distance to ground level in. *(mm)*	8.0 *(203)*	14.1 *(359)*	22.0 *(559)*	29.9 *(759)*	37.8 *(959)*
Lift force on frame lb	12115	9035	7060	5825	5150
" " " " " " *(kN)*	*(53.9)*	*(40.2)*	*(31.4)*	*(25.9)*	*(22.9)*

HITCH DIMENSIONS AS TESTED - NO LOAD

	Cab end		Engine end	
	inch	*mm*	inch	*mm*
A	27.8	*705*	20.7	*525*
B	10.0	*254*	16.9	*430*
C	14.0	*356*	15.1	*383*
D	13.4	*341*	9.4	*240*
E	8.5	*215*	15.6	*395*
F	9.0	*229*	8.3	*211*
G	30.3	*770*	30.3	*770*
H	3.8	*96*	3.8	*96*
I	12.8	*325*	31.0	*788*
J	21.3	*541*	22.0	*559*
K	16.2	*412*	18.3	*465*
L	40.0	*1017*	51.7	*1313*
M	22.1	*561*	NA	*NA*
N	36.0	*915*	36.0	*915*
O	7.9	*200*	7.9	*200*
P	45.3	*1051*	46.0	*1169*
Q	37.2	*945*	36.4	*925*
R	30.3	*770*	22.5	*572*



New Holland TV 6070 Diesel

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